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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,468	07/07/2003	Michael Yeh	251807-1010	7633

24504 7590 01/28/2005

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EXAMINER

BASTIANELLI, JOHN

ART UNIT	PAPER NUMBER
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3751

DATE MAILED: 01/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,468

Applicant(s)

YEH, MICHAEL

Examiner

John Bastianelli

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/27/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species I of Figs. 1A-1B pertaining to claims 1-5 in the reply filed on December 27, 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). The examiner would like to thank the applicant for calling to clarify the restriction requirement as the examiner mistakenly used the claim #'s instead of the figure #'s in the restriction requirement of November 29, 2004.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Trost et al. EP 0102528 A2.

Trost discloses a pressure regulating device for a container 11 in which gas is contained, the container having a vent hole 13 through which the gas is vented, the pressure-regulating device having an electrical control unit 22 for outputting a voltage; a deformable member 21 coupled to the electrical control unit, wherein the voltage causes the deformable member to generate a corresponding deformation; and an adjustment member 21b disposed on the deformable member and opposite to the vent hole, wherein the deformation causes the adjustment member to

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generate a corresponding displacement, and causes the vent hole to open or close according to the displacement of the adjustment member so that the interior pressure of the container may be regulated. The deformable member is seen as a piezoelectric sheet.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3, and alternatively 2, is rejected under 35 U.S.C. 103(a) as being unpatentable over Trost et al. EP 0102528 A2 in view of Lazarus et al. US 6,024,340.

Trost lacks a laminated piezoelectric sheet. Lazarus discloses a laminated piezoelectric sheet (col. 5, lines 13-50). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the piezoelectric deformable member of Trost into a laminated piezoelectric sheet as disclosed by Lazarus in order to provide "a unitized and unitary stiff but flexible laminated sheet assembly".

6. Claim 4, is rejected under 35 U.S.C. 103(a) as being unpatentable over Trost et al. EP 0102528 A2 in view of Weber et al. US 5,880,752.

Trost lacks a bi-metallic deformable member. Weber discloses using a bi-metallic member (col. 5, lines 19-25) as the deformable member. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the piezoelectric deformable member

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of Trost into a bimetallic sheet as disclosed by Weber in order to provide a cheaper apparatus in which to make the valve (bimetallic strips are common in thermostats).

7. Claim 5, is rejected under 35 U.S.C. 103(a) as being unpatentable over Trost et al. EP 0102528 A2 in view of Biegelsen et al. US 6,123,316.

Trost lacks a memorizing alloy deformable member. Biegelsen discloses the equivalency of piezoelectric and shape memory alloy (SMA) deformable members (col. 8, lines 9-29). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the piezoelectric deformable member of Trost into a memorizing alloy deformable member as disclosed by Biegelsen as memorizing alloys provide a quicker response time.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Miyazoe discloses laminated piezoelectric. Talbot discloses the equivalency of using piezoelectric and bimetallic members. Ito discloses a shape memorizing alloy. Frick, Jacobsson, Bouchard, Castle, and Lloyd disclose piezoelectric pressure regulating valves. Russell, Sulatisky, Nusz, and Surjaatmadja disclose pressure regulating valves controlled by an electronic unit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Bastianelli whose telephone number is (571) 272-4921. The examiner can normally be reached on M-F (9:00-6:30).

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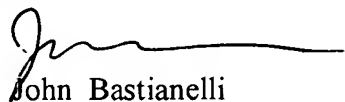
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JB

January 26, 2005



John Bastianelli
Primary Examiner
Art Unit 3751